

Kansas Healthy Homes and Lead Hazard Prevention Program

2010 Annual Report

*“Protecting the health and environment of all Kansans by
promoting responsible choices”*



Kansas Healthy Homes and Lead Hazard Prevention Program Report Contents

Medical &
Environmental
Surveillance

Adult
Lead
Poisoning

Licensure &
Regulatory
Compliance

Lead Poisoned
Children &
Case Management

Environmental
Investigations

Partnerships

Mapping

Program
Accomplishments

Overview of the Healthy Homes Program

The Kansas Department of Health and Environment (KDHE) established the Kansas Childhood Lead Poisoning Prevention Program (KCLPPP) to respond to concerns about lead and its effect on the health of Kansans, most notably our children. In 2007, the KDHE Lead Advisory Committee was charged with changing the program name to include all aspects of healthy homes. Thus the KDHE Healthy Homes and Lead Hazard Prevention Program was created to protect Kansans from environmental health exposures occurring within the home. The program recognized the association between health and housing; and in keeping with the direction of federal partners expanded our focus to include additional healthy homes hazards such as mold, radon, pests, asbestos, injury prevention and safety, carbon monoxide as well as lead.

The mission of the KDHE Healthy Homes and Lead Hazard Prevention Program is to promote healthy and safe environments for families in Kansas through the awareness, education and reduction of environmental hazards in their homes.

The Lead Program's activities reflect and promote KDHE's mission to protect the health and environment of Kansans by promoting responsible choices. The HHLHPP is divided into five sections:

■ Medical Surveillance

■ Case Management

■ Adults Lead Poisoning

■ Licensure and Certification

■ Grant Project Development.

The Medical Surveillance section is concerned with increasing blood lead screening among all ages with focus on children ranging in age from six to 72 months. We are increasing primary prevention activities to reduce lead hazard exposure by providing follow up and Case Management (medical and environmental) to the identified children and in addition to educational packets and surveys to adults with elevated blood lead levels. Environmental investigations are crucial in determining the source(s) of lead poisoning among children in Kansas.

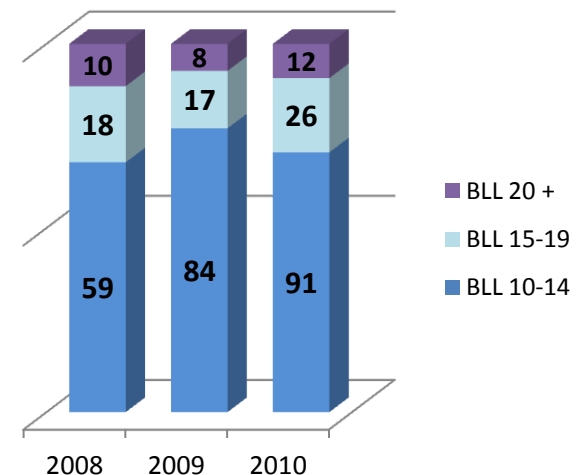
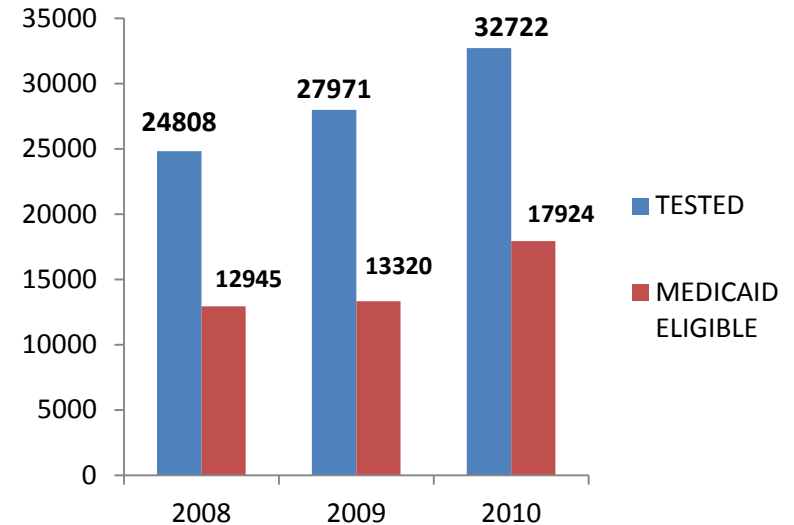
The Licensure and Certification section is in charge of licensing firms and certifying individuals to perform lead abatement work, lead inspections and risk assessments. The RRP section is designed to provide an enforced regulation to educate the public as well as general contractors and landlords on the hazards associated with remodeling and renovation of pre-1978 housing. The enforcement team also initiates lead hazard control work orders under new regulations posted April 9, 2010. The completions are proven to be effective in lowering blood lead levels.

Housing Goal: To eliminate lead hazards from where children live, play, and visit by providing a mechanism to allow the public to make lead-safe housing choices.

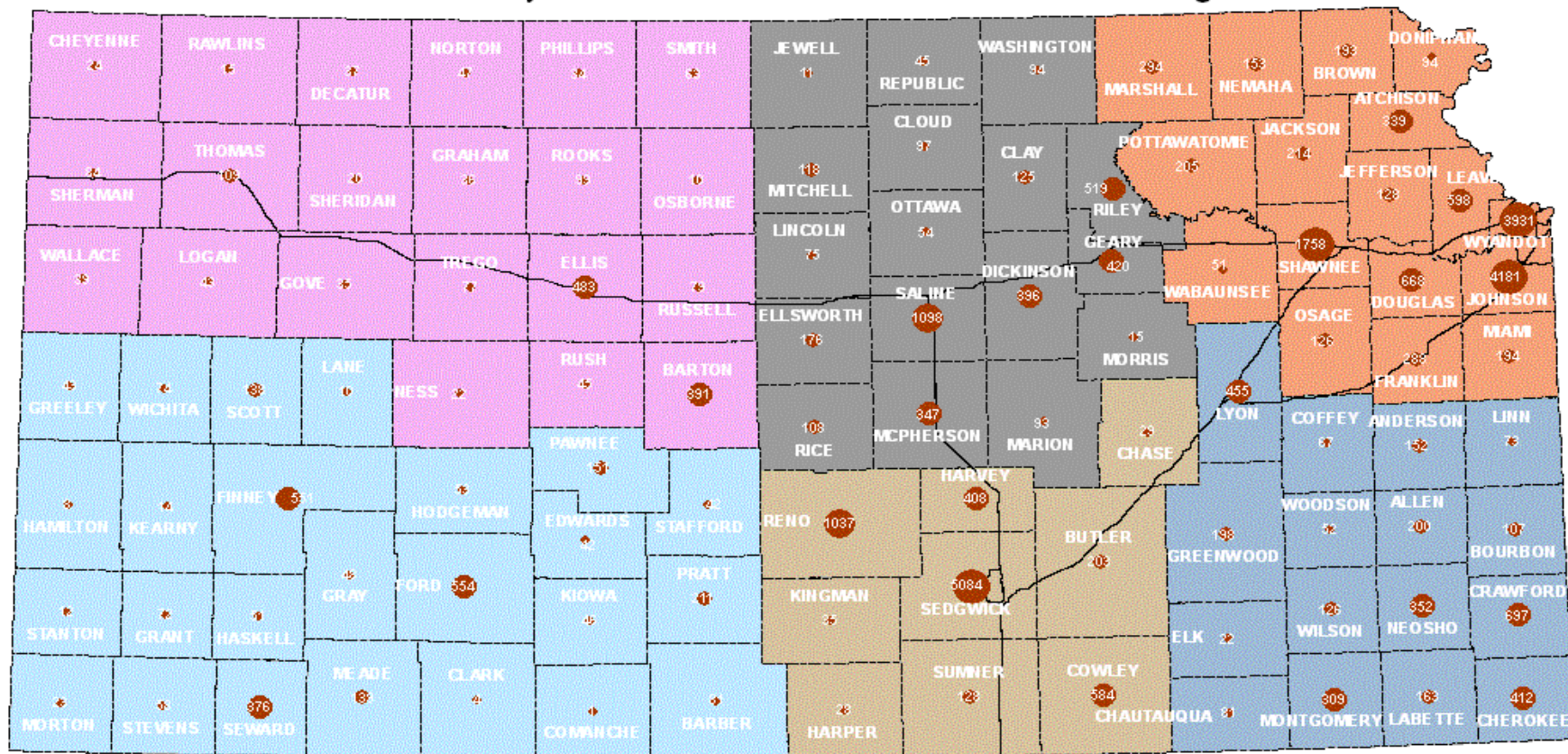
Health Goal: To increase the number of children <72 months of age that have received a blood lead test.
To decrease the % of children tested whose blood lead levels are $\geq 10 \mu\text{g/dL}$.

Medical and Environmental Surveillance






- The Kansas Healthy Homes and Lead Hazard Prevention Program currently receives blood lead *test* results from 21 laboratories both public and private including 6 facilities that use the *LEAD-Care II Machines*. Lead surveillance data presented here addresses children age 0- <72 months who were tested for lead at least once between January 1, 2010 through December 31, 2010.
 - Data has been derived from the state of Kansas lead data surveillance system known as STELLAR. The increase in the total number of children tested may be influenced by distribution and discussion of the revised case management guidelines, adoption of mandatory reporting regulations and focused efforts of the Healthy Homes and Lead Hazard Prevention Program and Staff.
 - To increase and maintain identification of Medicaid eligible children, HHLHPP performs monthly data matching with Children's Mercy Family Health Partners and Unicare, the two contracted Medicaid agencies in Kansas. This activity allows all collaborating agencies to audit client and provider participation in meeting required objectives. Current patient addresses are also included with the Medicaid data that is sent from Children's Mercy and Unicare and help provide increased demographic information as to what county that child resides in.
- ➡ **Blood Lead Test:** Any blood lead test (capillary, venous, filter paper or unknown sample type) on a child that produces a quantifiable result and is analyzed by a CLIA-certified facility or an approved portable device. A blood lead may be collected for screening, confirmation or follow-up.
- ➡ **LEAD-Care II Machines:** Providers that utilize the Lead Care II or other generation Lead Care device must adhere to state and federal regulations regarding their use. Please refer to the state CLIA office at 785-296-8634 for complete details.



Kansas Healthy Homes & Lead Hazard Prevention Program



Number of Tests

-  1 - 99
 100 - 299
 300 - 699
 700 - 1699
 1700 - 5100

*Tests types include venous and capillary blood draw and paper filter tests.

** Kansas Department of Health and Environment (KDHE) District Offices


Note: The children tested were between 0 to 17 years old at the time of the test.

Note: 17% (6,716) of the lab tests reported did not contain an address.

Note: The last known address of the child was used in 1 047 (2.7%) tests where the address information was missing.

KDHE Districts

 N

 NNW 

SC

SE

SW



June 2011

Lead Poisoned Children and Case Management Action

A child identified as lead poisoned will receive case management from their private provider, their local health agency and the HHLHPP as a collaborate team.

Case management actions include:

- Nutritional and lead hazard control education
- Continued monitoring of the child's blood lead level
- An environmental investigation
(an environmental investigation identifies the source of lead exposures and identification and education of other health hazards in the home and environment.)

In 2010, Kansas identified **131** new cases of Lead Poisoning in children 0-72 months in age and **154** existing cases from previous years . There are **285** children with active lead poisoning who are receiving case management services , including education to the families to reinforce efforts on how to reduce the lead hazards and exposure to decrease the child's lead level.

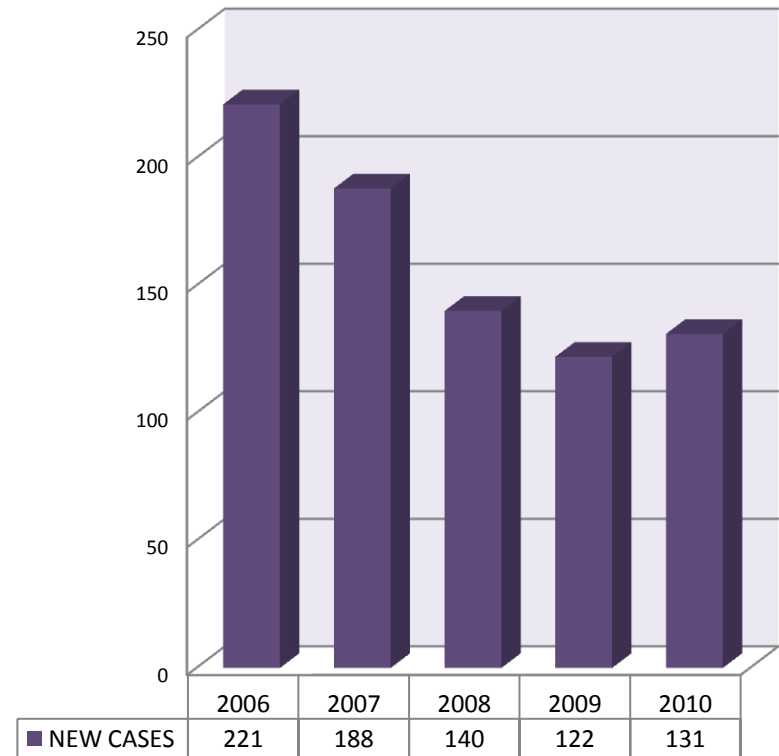
Of the **131** new cases , **38** children that were tested had a blood lead level of 15µg/dL or higher. Out of the new cases opened in 2010, **14** have been able to be closed out.

CONTRACT COUNTIES: Johnson, Saline, Reno, Sedgwick, Shawnee and Wyandotte are the program contract counties and have an EBL investigator that helps the HHLHPP monitor lead cases in these areas.

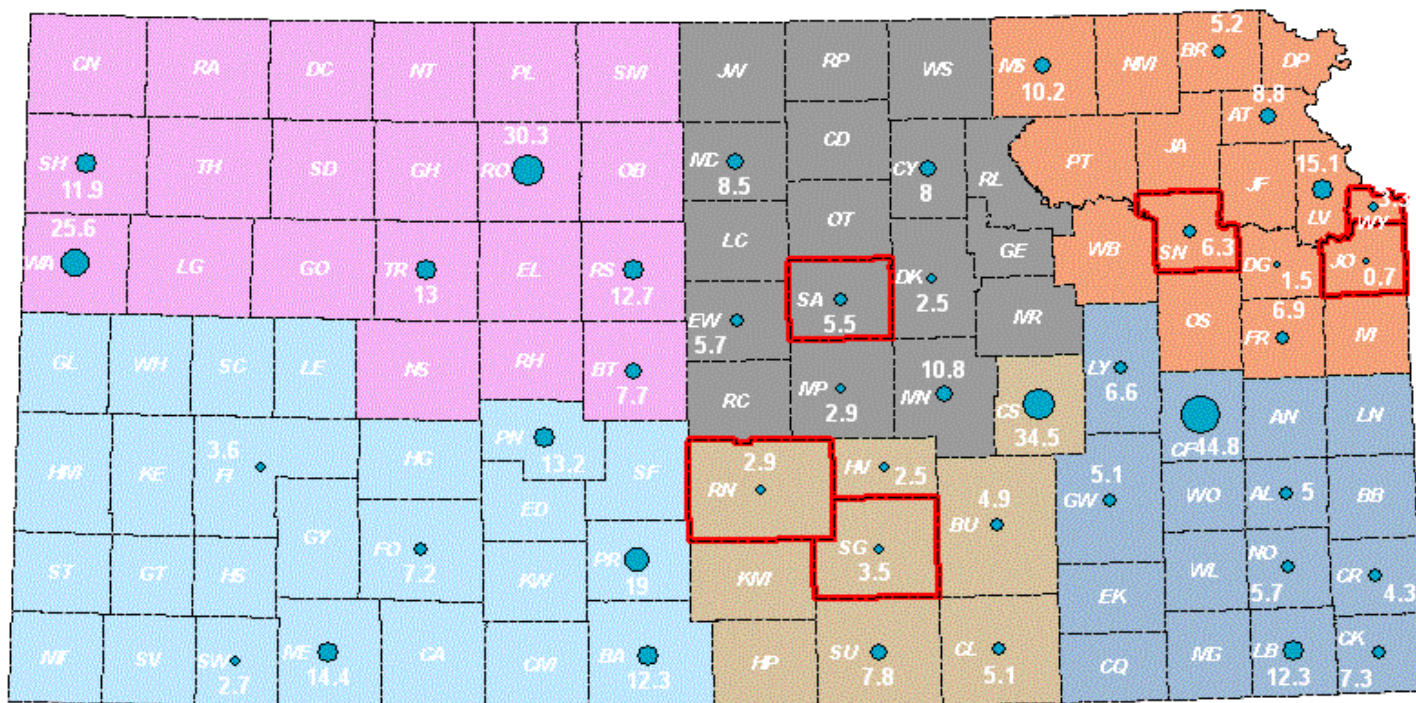
Kansas identifies a confirmed case of lead poisoning in children when one of the following criteria is met:

- ❑ One venous draw blood test indicating a BLL ≥ 10 µg/dL, **or**
- ❑ Two (capillary or filter paper) blood tests recording BLLs of ≥ 10 µg/dL within a 12 week period.

New Cases from 2006-2010



Rate of Confirmed Childhood Lead Poisoning* Cases
Per Thousand Blood Lead Tests Administered During 2010,
By Health District**, and County
Kansas Healthy Homes & Lead Hazard Prevention Program



Confirmed Cases/1,000 Tests

- 1
- ◆ 2.5
- 5
- 10

Note:
Counties with no data
had no case in 2010

KDHE Districts



*Confirmed Case is defined as any venous blood test ≥ 10 micrograms/deciliter or 2 consecutive capillary tests ≥ 10 micrograms/deciliter within a 12 week period.

** Kansas Department of Health and Environment (KDHE) District Offices

Note: The children tested were between 0 and 17 years old at the time of the test.

June 2011

Program-Designated At-Risk Counties ☐

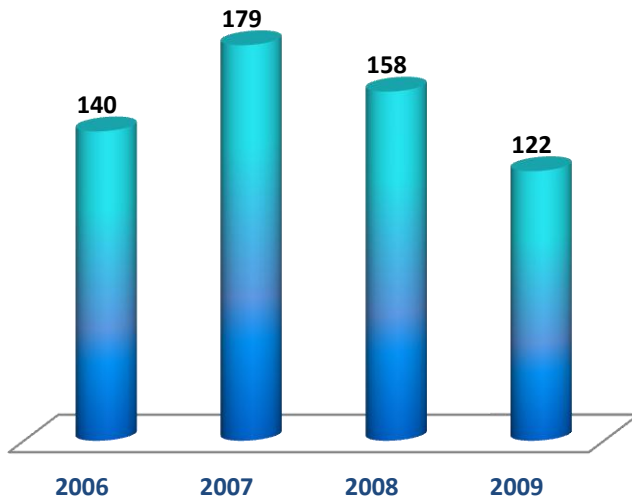
Environmental Investigations

The Kansas Healthy Homes and Lead Hazard Prevention Program and contracted environmental investigators conduct in-home investigations to identify lead and other healthy home hazards to reduce these risks in the child's environment and to educate parents .

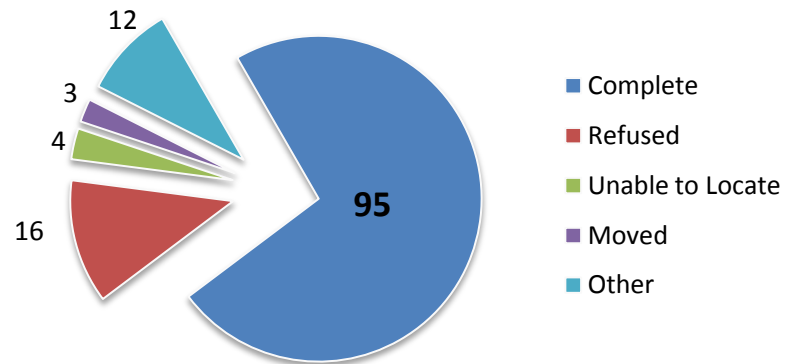
An environmental inspector should also visit the child's residence, with the case manager if possible, to conduct a thorough investigation of the site and identify sources of environmental lead exposure. The case management team can then use the results of this investigation to develop a plan to protect the child and family and to correct hazardous conditions. Although environmental services may be provided by the case manager, the environmental inspector, or other program staff, the case manager is responsible for ensuring that a child receives services in a timely fashion.

The graph below shows environmental investigations that were completed between 2006 to 2009. In 2010, Kansas identified **131** new cases of children with lead poisoning and the HHLHPP staff completed **95** of the eligible environmental investigations for those cases . Participation is voluntary and at this time not all families choose to have the investigation performed. The chart below represents the environmental investigation completion status for 2010.

**Investigations Completed
2006-2009**

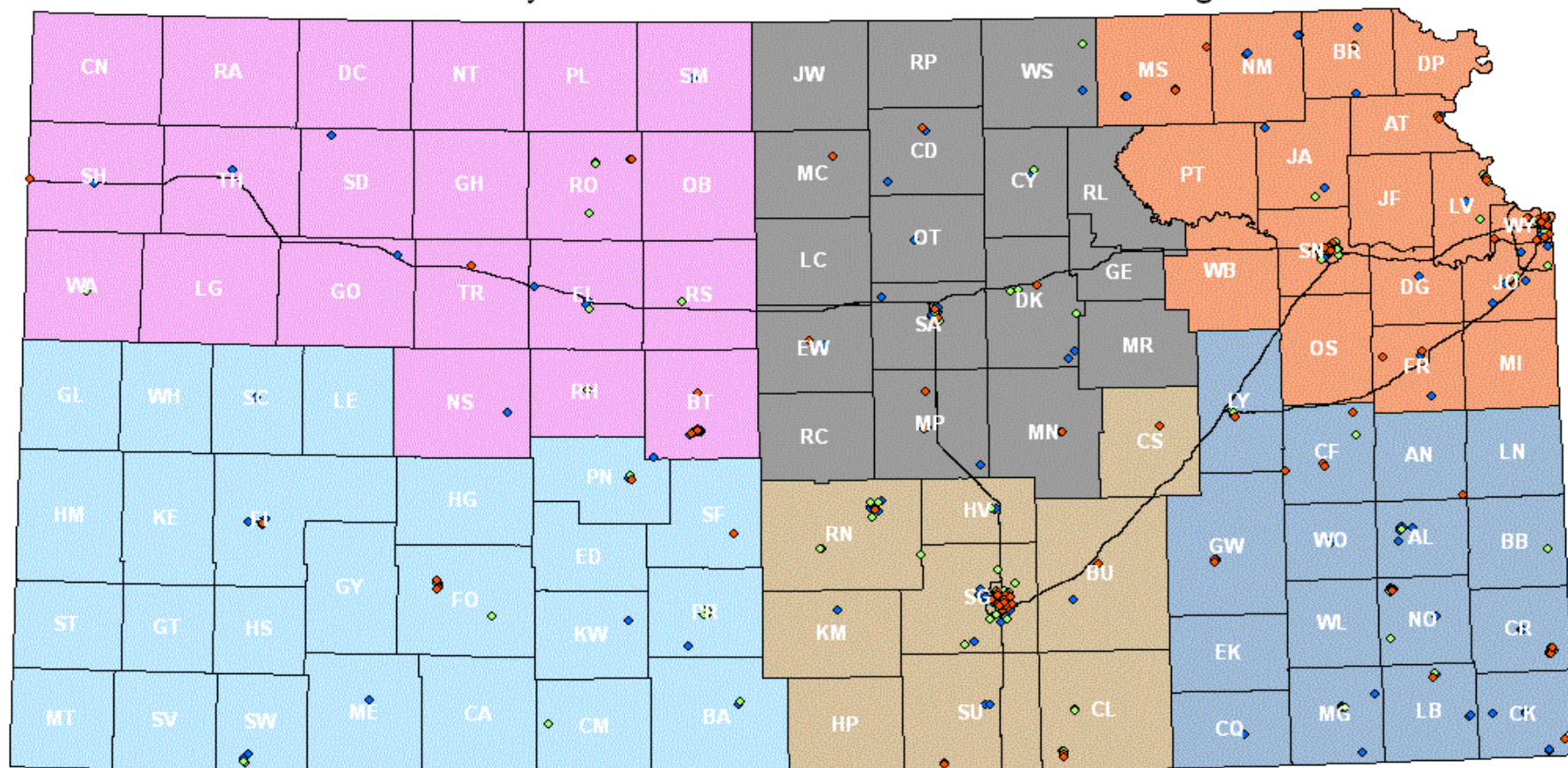


**2010 Environmental Investigations by Completion
Status n=130**



Distribution of Residences Where Children Tested Positive for EBL* in 2010, By Residence Status, Health District**, and County

Kansas Healthy Homes & Lead Hazard Prevention Program



Status of Residences

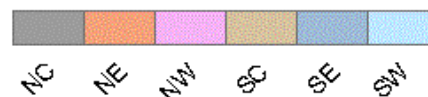
- Investigated for Lead Hazards (N=116)
- Home for a Confirmed Case (N=177)
- Home for a Child with EBL (Not Confirmed) (N=213)

*EBLL: Elevated Blood Lead Level ≥ 10 micrograms/deciliter

** Kansas Department of Health and Environment (KDHE) District Offices

Note: The children tested were between 0 and 17 years old at the time of the test.

KDHE Districts



KANSAS
HealthyHOMES
A LEAD HAZARD PREVENTION PROGRAM

June 2011

Targeted Screening Areas

In 2001, the program developed a targeting model to determine 'High Risk' areas for lead poisoning within our state. The model considered four-census variables:

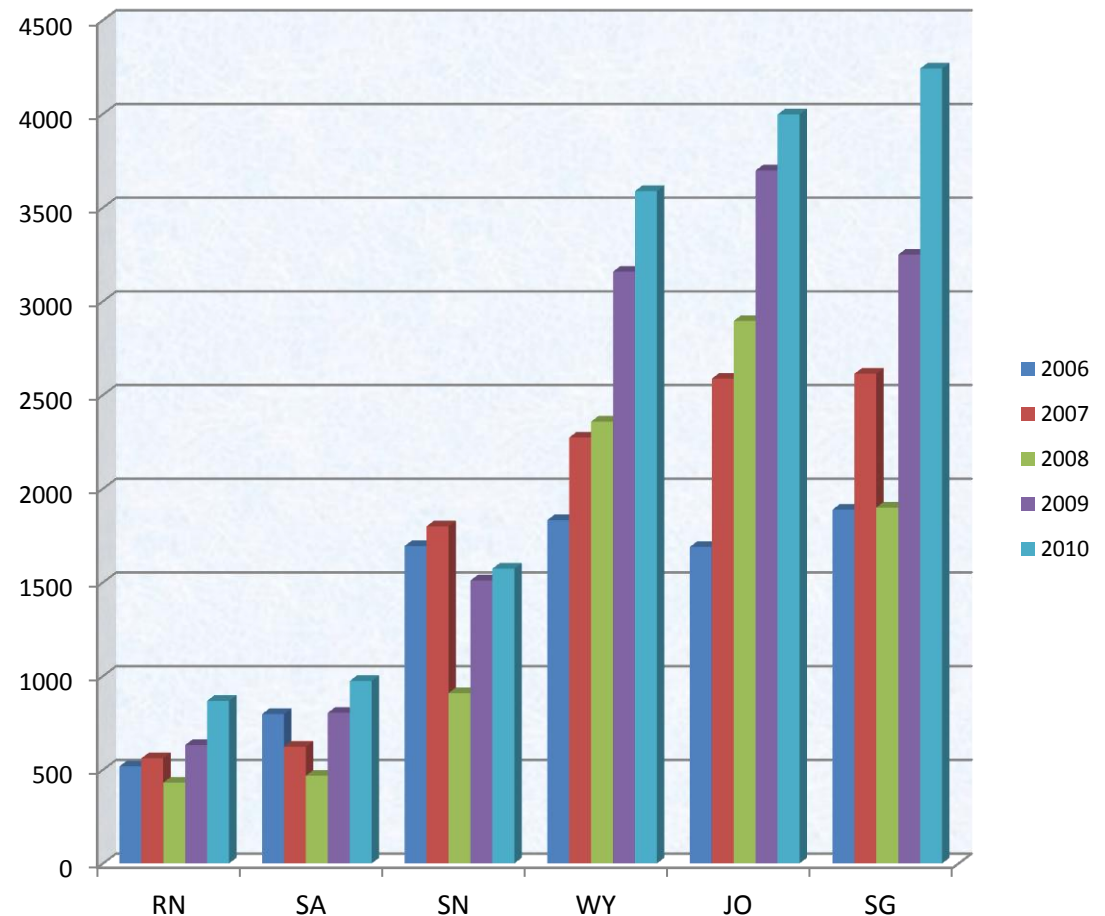
- Density of pre-1960 housing
- Density of minority population
- Density of impoverished population
- Density of population age 5 and under

Utilizing the targeting model and testing data recorded by the program, GIS maps were developed to identify "At Risk" or "High Risk" areas with the goal of concentrating efforts to reduce lead poisoning in those areas. Ongoing testing and screening events occur in these areas as a continuing effort to identify lead poisoned children and to bring awareness of other related Healthy Homes initiatives to parents.

In addition, Wyandotte County received a mini grant in 2010 to increase testing and awareness in their area. The HHLHPP staff host several Healthy Homes Practitioner Course training through out the year in many of these High Risk areas and the programs district office is located in WY county where free lead testing is offered and staff are present for assisting the public.

Six High Risk Counties

- ☐ *Reno County (RN)*
- ☐ *Saline County (SA)*
- ☐ *Shawnee County (SN)*
- ☐ *Wyandotte County (WY)*
- ☐ *Johnson County (JO)*
- ☐ *Sedgwick County (SG)*



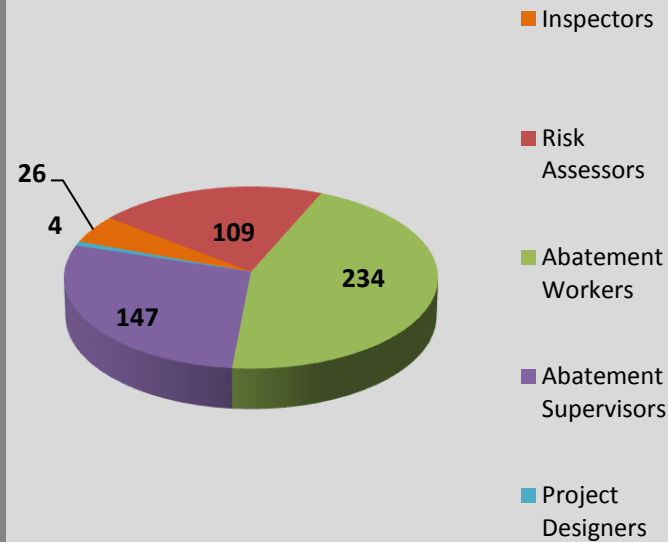
Environmental Protection Agency

The Licensure and Compliance section offers certification for five separate disciplines:

- Lead Inspector
- Lead Hazard Risk Assessor
- Lead Abatement Worker
- Lead Abatement Supervisor
- Project Designer

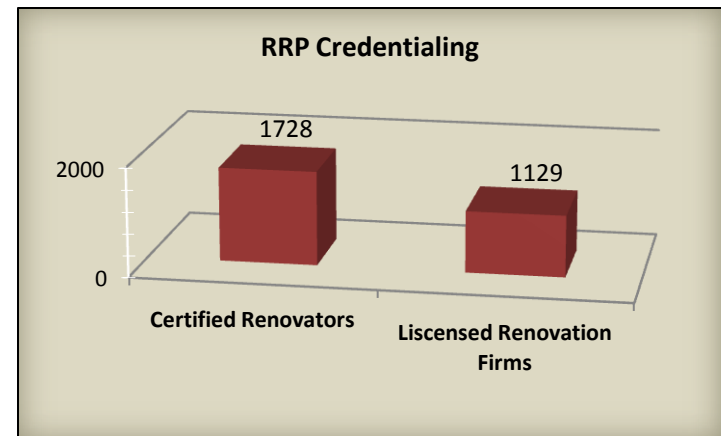
The program also offers accreditation to training providers to offer both initial and refresher training courses for each of the disciplines. The Licensure and Compliance section further regulates lead activities in residential housing and child-occupied facilities in Kansas including lead abatement, lead inspections, lead hazard risk assessments, lead hazard screens, EBL investigations and post-abatement clearance.

Lead Professionals By Type



Renovation, Repair and Painting Rule

With the inclusion of the Renovation, Repair and Painting Rule as Adopted from EPA, the KDHE HHLHPP Licensure and Certification section was tasked with licensing and certifying firms and individuals for renovation, repair and painting activities across the state in pre-1978 homes and child occupied commercial facilities. The total number of Licensed Renovation Firms and Certified Renovators can be found in the follow chart:



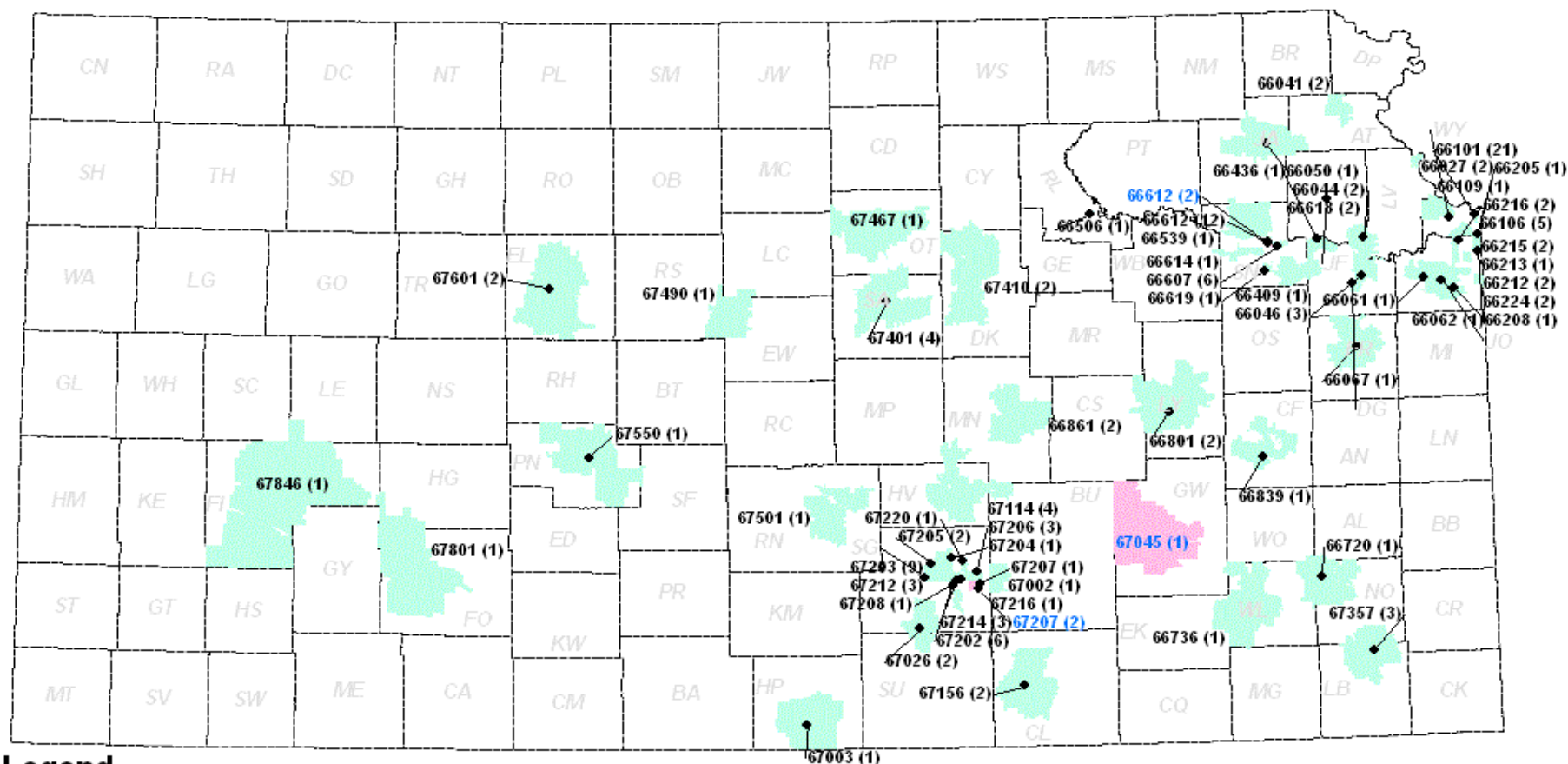
With the inception of the Renovation, Repair and Painting Rule in April of 2010, the HHLHPP has been required to monitor compliance with the new rule and enforce regulation through compliance audits. As the regulation was new to many companies across the state, immediate widespread compliance audits were delayed to allow enough time for contractors to be made aware of the regulation and come into compliance. During this time, compliance audits were based solely on tips/complaints from the general public.

- **The numbers of tips/complaints are 69 total with 26 found to be non-compliant.**

Essentials for Healthy Homes Practitioners Course (HHPC)

Number of Trainees and Instructors by ZIP Code

Kansas Healthy Homes and Lead Hazard Prevention Program



Legend

Instructor(s)

Trainee(s)

County Boundary

Note: Classes were held during 2008 and the first half of 2011.
The total number of trainees was 142 and the number of instructors was 5.

66612 (3) = ZIP Code (Number of trainees)

66612 (3) = ZIP Code (Number of instructors)

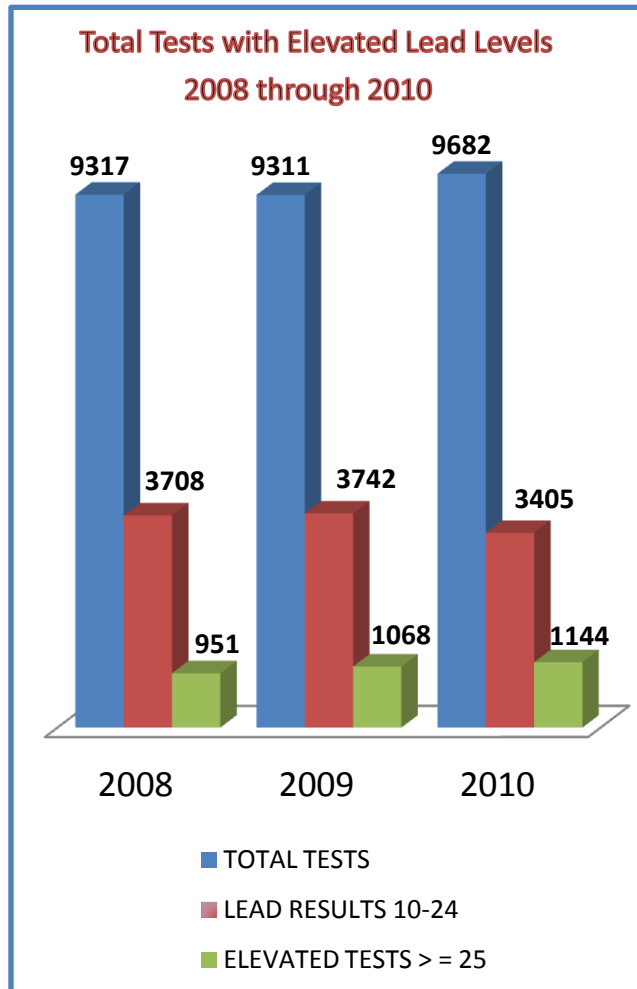
Medical Surveillance of Adult Data

Kansas Healthy Homes and Lead Hazard Prevention Program participates in the Adult Blood Lead Epidemiology and Surveillance (**ABLES**) program for the National Institute for Occupational Safety & Health (**NIOSH**). The program collects data, monitors elevated blood lead levels in adults and provided outreach to adults at risk of lead poisoning due to occupational or other associated lead hazards.

In 2009, NIOSH changed the benchmark for elevated adults to 10 µg/dL. The HHLHPP provides educational material to help prevent lead exposure from increasing to a blood lead level of 25µg/dL or above. At 25µg/dL the individual becomes a case and a Case Manager from the HHLHPP program as well as their employer works with the individual to see that the levels decreases. We ask that they complete a survey that will give our Case Managers insight as to where their exposure is highest and work to lower the level.

In addition, The HHLHPP received an increase in funding in 2010 from NIOSH to increase awareness among adults with a focus on having *take home lead* and increased exposures to children living at that residence. 53% of the adults tested for lead or that have an elevated lead level work at one of the three battery plants in Kansas. Our case managers work with the battery plants to collect additional information on exposure sources, provide additional education and assist in obtaining any required medical attention if desired.

The lead surveillance data represents the total number of adult blood lead tests that were reported in 2010. 9682 total tests were reported. Out of the total number of tests 1144 tests were reported with an elevated lead level of 25µg/dL or greater. At this time, 319 adults are considered to be a lead poisoned and are being case managed by the HHLHPP and their employer.



The ABLES program is funded solely by the National Institute for Occupational Safety and Health (NIOSH), a division of the Centers for Disease Control and Prevention (CDC).

Medical Providers and Laboratories

Provider Report and Survey for 2010

- In December 2010, The Kansas Department of Health and Environment and HHLHPP revised the current reporting regulations, K.A.R 28-1-18, to include more patient demographic information and other required data elements to be included by providers and laboratories when reporting blood lead testing.
- A provider packet including a survey, current reporting regulation and program educational material was sent to each Pediatrician and Family Practice Providers in the state of Kansas. The survey asked providers for feedback to help aid staff in the HH program to identify and resolve barriers they may have identified in blood lead testing, receiving and reporting 100% accurate data and if their clinic would be interested in participating in the use of filter paper as a method of lead testing.
- The HHLHPP continues to contact medical providers across the state to educate on the risks, signs and symptoms of lead poisoning among children and the importance of having all children tested with high emphasis on children 0-72 months in age.

Laboratory / Data Collection

- Kansas currently has 21 laboratories and 6 Lead Care II users that report both electronic and manual blood lead test results to the HHLHPP. In 2010, the total number of blood lead test results reported to the HHLHPP were **38,471**.
- Providers are being encouraged to use filter paper as a sampling method. At this time the Kansas Department of Health and Environment Laboratory analyzes the highest number of filter paper test. In 2010, KDHE Lab analyzed **12,467** and that number continues to grow as providers incorporate filter paper into their clinics.
- The HHLHPP is working with all reporting laboratories to implement the ELR (Electronic Lab Reporting) process which will allow direct importing into the program database HHLPSS. This will help to eliminate manual data entry, errors from being made and reduce the time staff spends entering blood lead test results.

Data and Surveillance Tracking

Moving from STELLAR to HHLPSS

STELLAR

Systematic Tracking of Elevated Lead Levels And Remediation.



HHLPSS

Health Housing and Lead Poisoning Surveillance System

 **ELR – Electronic Lab Reporting**

In January of 2010, The HHLHPP started working on a the implementation of a new database system designed by the Center for Disease Control (CDC) to collect Healthy Housing data. Our current surveillance system known as **STELLAR** only collects LEAD, Case Management and Environmental Data. Stellar was the original database for the Childhood Lead Poisoning Prevention Program when the program started in 2001.

The HHLHPP is in the final stages of adopting and migrating all data from the STELLAR database into Healthy Housing and Lead Poisoning Surveillance System also known as **HHLPSS**.

HHLPSS is a web based application that will allow field staff as well as health department, medical provider and laboratories to access child and case data remotely. HHLPSS will not only continue to collect Lead, Case Management and Environmental data but other healthy homes variable and will phase out the use of STELLAR in June 2011.

The HHLHPP is one of several programs within the state of Kansas that is in the beginning stages of converting to Electronic Lab Reporting instead of manually entering data. STELLAR was not capable of accepting **ELR** data but with the new HHLPSS database system it will allow ELR processing from Laboratories that are equip and capable of reporting in an HL7 electronic reporting method.

Kansas Train

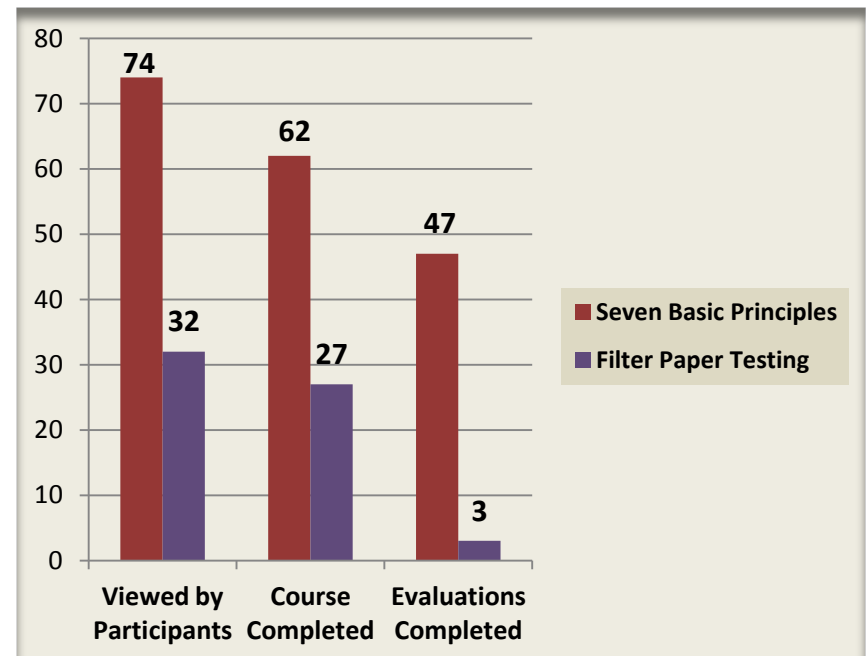
Kansas entered into a partnership with the National Training Center in 2009. The partnership allowed for public health professionals across our region to be trained in the Healthy Homes Practitioner Course.

The course outlines the Seven Basic Principles of Healthy Homes and has been adopted across the nation as the standard in Healthy Homes training and certification.

KHHLHPP goal is to train representatives at every local health department in the Healthy Homes Practitioner Course as a way of building capacity. The program has taken the charge of traveling across the state with certified and trained educators to overcome barriers of cost and travel time for the benefit of the communities who are willing to help the program meet the capacity building goal.

KS-Train is an on line training site where participants can find, complete and store documentation of online modules.

KHHLHPP currently has two modules online for health professionals and consumers. The program also offers three accreditation exams through the web portal. The following graph depicts the access and completion of the programs offered by KHHLHPP



Healthy Homes Partnerships

- Brush Art Corporation
- Pittsburg Development Public Housing
- City of Wichita Housing and Community Services
- KDHE Radon Department
- Star Lumber & Supply
- Home Lumber- El Dorado
- Baker Environmental Consulting, Inc.
- Green Initiative Foundation
- Wichita State University
- KDHE Environmental Laboratories (KHEL)
- Health Department & Home Health Agency- Reno County
- McCollum Construction Inc.
- Safe Kids-Kansas
- Crawford County Health Department
- Coronet Window Company
- United Builders & Contractors, Inc.
- Sedgwick County WIC Program

- Kansas Weatherization Program
- KS Housing Resource Corporation
- Kansas – Train
- Wichita State University
- Saline County Health Department
- Kansas Administration of Commerce
- Children's Mercy Family Health Partners
- Unicare
- Children's Mercy Environmental Health Unit
- MAPSUE – Poison Control Center
- St. Marks United Methodist Church/EC Tyree Health Dental
- City of Topeka Housing Services
- Wyandotte County Unified Government
- Community Housing Services of Wichita
- El Centro-KCK
- Ana Rodriguez-Translator
- Norandex / Reynolds – Wichita

Accomplishments and Highlights

- The program worked with CDC to implement a new database system HHPSS. This is a web based application that will allow Health Departments, Provider, Laboratories and field staff to access data remotely.
- Updated regulations on reporting Lead testing by laboratories and the collection of more patient demographic information to be submitted by providers testing for LEAD.
- Adult Blood Lead Program – ABLES- received an increase in funding for further education, outreach opportunities and activities.
- Successfully adopted EPA regulations by adoption to enforce all aspects of RRP as a Self Authorized State.
- Developed and implemented an online registry and fee payment option for lead safe renovators and firms.
- Developed and implemented an online searchable database of all licensed lead professionals in the State of Kansas.
- Completed a successful EPA audit of all aspects of enforcement program and staff.
- Completed a successful CDC audit of all aspects of case management and data surveillance.
- Partnered with EPHT to share data and launch two sites that will highlight our program activity and testing results throughout our state.
- Received a 3.1 Million Dollar Grant for Lead Hazard Control throughout the State of Kansas.
- Became an independent National Training Center Partner.
- GIS mapping advancement were made for program benefits.